

Attorney Docket: 030347  
U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
Response to July 23, 2008 Final Office Action

**LISTING OF THE CLAIMS**

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[c01] (Previously Presented) A method, comprising:

receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

recognizing a repetitive segment and inserting a data compression result of a preceding segment to reduce processing of redundant segments;

dispersing at least one of the segments via a network for a subsequent processing service;

determining a subcontracted processing service is required from a different service provider;

grouping together individual packets of data that require the subcontracted processing service as a new segment;

subcontracting the new segment to the different service provider to receive the subcontracted processing service;

receiving a subcontracted result of the subcontracted processing service;

receiving a result of the processing service;

aggregating the result of the processing service and the subcontracted result into a second data stream; and

communicating the second data stream via the network.

[c02] (Previously Presented) A method according to claim 1, wherein recursively segmenting the first data stream comprises observing a sequence of packets having a similar structure to a previous sequence of packets and segmenting the sequence of packets to have similar content to the previous sequence of packets.

Attorney Docket: 030347  
U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
Response to July 23, 2008 Final Office Action

- [c03] (Previously Presented) A method according to claim 1, wherein recursively segmenting the first data stream comprises using a chronological characteristic of the preceding segment to describe the current segment.
- [c04] (Previously Presented) A method according to claim 1, further comprising replacing a complex segment with a common descriptor to produce an abbreviated annotation.
- [c05] (Original) A method according to claim 1, further comprising accruing historical routing information for a segment, the historical routing information describing at least one destination of the segment as the segment travels via the network.
- [c06] (Original) A method according to claim 5, further comprising assembling the second data stream using the historical routing information for the segment.
- [c07] (Original) A method according to claim 1, further comprising accruing historical processing information for a segment, the historical processing information describing at least one process performed on the segment.
- [c08] (Original) A method according to claim 7, further comprising assembling the second data stream using the historical processing information for the segment.
- [c09] (Previously Presented) A method of providing communications services, comprising:
- receiving a request for communications service, the request for communications service originating from a user's client device, the request for communications service communicating via a communications network to a service provider;
  - querying a payment history database for historical payment information relating to the user's history of payments to creditors;
  - querying a usage history database for historical usage information relating to the user's past usage of communications services;

Attorney Docket: 030347  
 U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
 Response to July 23, 2008 Final Office Action

querying a credit database for credit information relating to a line of credit with a credit card issuer;

linearly predicting that the user can be trusted to pay for the requested communications service, even though the total bill is undetermined, based on the historical payment information, the historical usage information, and the credit information;

receiving data at a computer, the data received as packets of data packetized according to a packet protocol;

recursively segmenting the packets of data into segments according to a segmentation profile stored in memory, the segmentation profile storing rules that define actions when a similar characteristic between segments is encountered, such that a characteristic of a preceding segment determines how a current segment is segmented;

recognizing a repetitive segment and inserting a data compression result of a preceding segment to reduce processing of redundant segments;

determining a subcontracted processing service is required from a different service provider;

grouping together individual packets of data as a new segment, each of the individual packets in the new segment requiring the subcontracted processing service;

dispersing at least one of the segments via a network for a subsequent processing service;

subcontracting the new segment to the different service provider to receive the subcontracted processing service;

receiving results of the subsequent processing service;

receiving a result of the subcontracted processing service;

assembling a data stream comprising i) the results of the subsequent processing service, ii) an unprocessed recursively segmented segment, and iii) the results of the subcontracted processing service; and

communicating the assembled data stream via the network to fulfill the requested communications service.

Attorney Docket: 030347  
U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
Response to July 23, 2008 Final Office Action

- [c10] (Previously Presented) A method according to claim 9, further comprising communicating the assembled data stream to a client communications device.
- [c11] (Previously Presented) A method according to claim 9, further comprising receiving a request for the assembled data stream.
- [c12] (Previously Presented) A method according to claim 9, wherein recursively segmenting the first data stream comprises using a chronological characteristic of one segment to describe another segment.
- [c13] (Previously Presented) A method according to claim 9, wherein recursively segmenting the first data stream comprises recognizing a repetitive segment and inserting a data compression result of a preceding segment to reduce processing of redundant segments.
- [c14] (Previously Presented) A method according to claim 9, wherein recursively segmenting the first data stream comprises observing a sequence of packets having a similar structure to a previous sequence of packets and segmenting the sequence of packets to have similar content to the previous sequence of packets.
- [c15] (Original) A method according to claim 9, further comprising accruing historical routing information for a segment, the historical routing information describing at least one destination of the segment as the segment travels via the network.
- [c16] (Original) A method according to claim 15, further comprising assembling the second data stream using the historical routing information for the segment.
- [c17] (Original) A method according to claim 9, further comprising accruing historical processing information for a segment, the historical processing information describing at least one process performed on the segment.

Attorney Docket: 030347  
U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
Response to July 23, 2008 Final Office Action

[c18] (Original) A method according to claim 17, further comprising assembling the second data stream using the historical processing information for the segment.

[c19] (Previously Presented) A system, comprising:

means for receiving a request for communications service, the request for communications service originating from a user's client device, the request for communications service communicating via a communications network to a service provider;

means for querying a payment history database for historical payment information relating to the user's history of payments to creditors;

means for querying a usage history database for historical usage information relating to the user's past usage of communications services;

means for querying a credit database for credit information relating to a line of credit with a credit card issuer;

means for linearly predicting that the user can be trusted to pay for the requested communications service, even though the total bill is undetermined, based on the historical payment information, the historical usage information, and the credit information;

means for extending trust-based credit to the user;

when the trust-based credit is extended, then means for permitting the user to negotiate with other service providers of other communications networks to fulfill the request for communications service;

means for receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

means for recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

means for recognizing a repetitive segment and for inserting a data compression result of a preceding segment to reduce processing of redundant segments;

Attorney Docket: 030347  
U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
Response to July 23, 2008 Final Office Action

means for determining a subcontracted processing service is required from a different service provider;

means for grouping together individual packets of data that require the subcontracted processing service as a new segment;

means for subcontracting the new segment to the different service provider to receive the subcontracted processing service;

means for receiving a subcontracted result of the subcontracted processing service;

means for dispersing at least one of the segments via a network for a subsequent processing service;

means for receiving a result of the subsequent processing service;

means for aggregating the result of the subsequent processing service, the subcontracted results of the subcontracted processing service, and an unprocessed segment into a second data stream; and

means for communicating the second data stream via the network to fulfill the requested communications service.

[c20] (Previously Presented) A computer program product comprising a computer readable media storing processor-executable instructions for performing a method, the method comprising:

receiving a request for communications service, the request for communications service originating from a user's client device, the request for communications service communicating via a communications network to a service provider;

querying a payment history database for historical payment information relating to the user's history of payments to creditors;

querying a usage history database for historical usage information relating to the user's past usage of communications services;

querying a credit database for credit information relating to a line of credit with a credit card issuer;

Attorney Docket: 030347  
 U.S. Application No. 10/720,949 Examiner SIKRI Art Unit 2109  
 Response to July 23, 2008 Final Office Action

linearly predicting that the user can be trusted to pay for the requested communications service, even though the total bill is undetermined, based on the historical payment information, the historical usage information, and the credit information;

extending trust-based credit to the user;

when the trust-based credit is extended, then permitting the user to negotiate with other service providers of other communications networks to fulfill the request for communications service;

receiving a first data stream comprising packets of data packetized according to a packet protocol;

recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

recognizing a repetitive segment and inserting a data compression result of a preceding segment to reduce processing of redundant segments;

determining a subcontracted processing service is required from a different service provider;

grouping together individual packets of data that require the subcontracted processing service as a new segment;

subcontracting the new segment to the different service provider to receive the subcontracted processing service;

receiving a subcontracted result of the subcontracted processing service;

dispersing remaining segments via a network for a subsequent processing service;

receiving a result of the subsequent processing service;

aggregating the result of the subsequent processing service, the subcontracted results of the subcontracted processing service, and an unprocessed segment into a second data stream; and

communicating the second data stream via the network to fulfill the requested communications service.